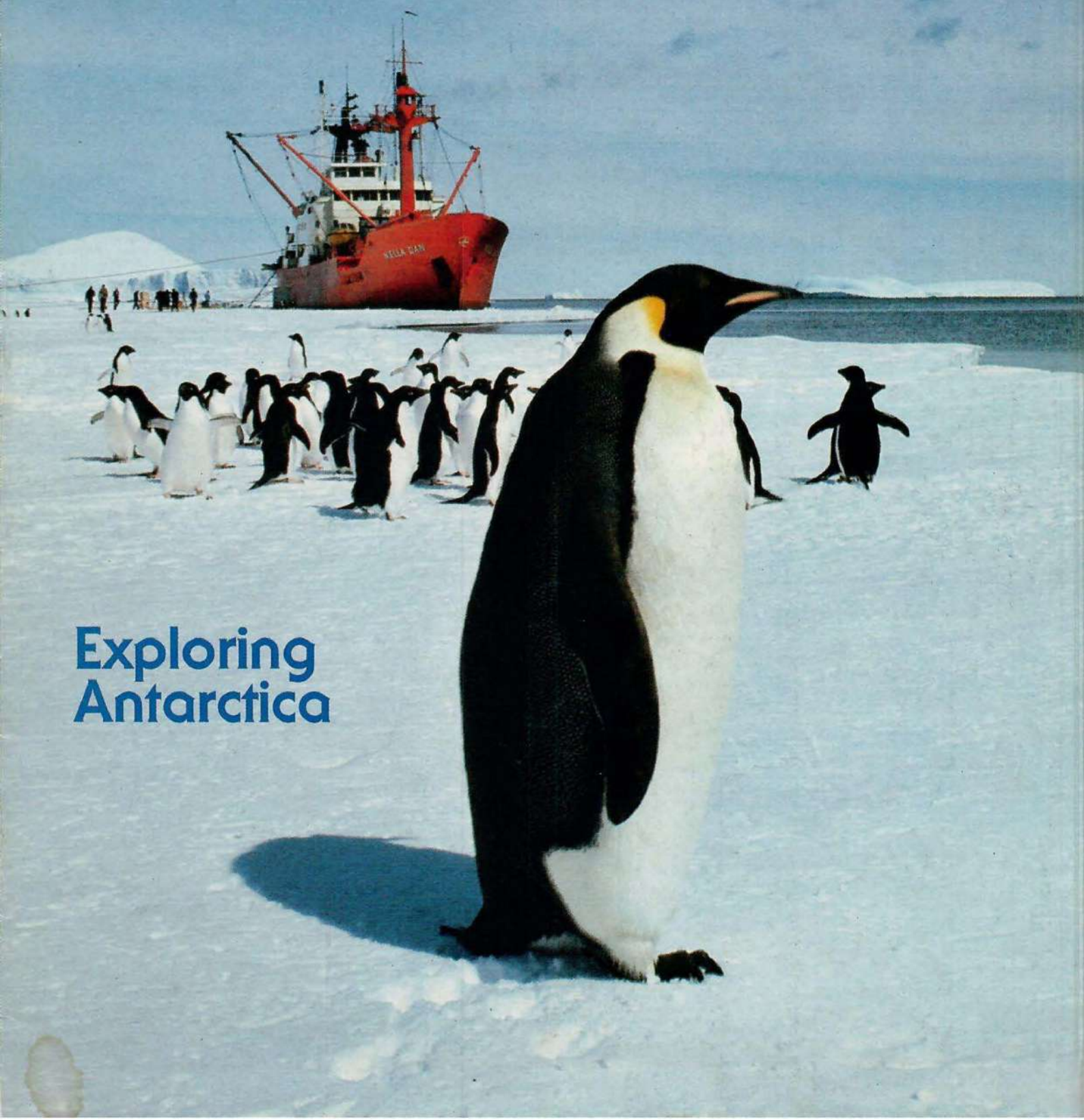


A Science Magazine from CTW, the Creators of Sesame Street.

February 1985

# 321 CONTACT



Exploring  
Antarctica





## "Snow" What's Happening?

Fun in the snow is a wonderful part of winter—at least in many parts of the U.S. But even if you live where there is no snow, this puzzle will give you a taste of winter. The only problem right now is that the winter scenes are mixed up. Can you put them in the right order? See page 35 for the answer.

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# 321 CONTACT

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# Working for Peanuts

**MEET THE PEOPLE WHO BRING  
SNOOPY AND FRIENDS TO LIFE**

by Ken Wilson



Think fast. Name a gang that has won fame, fortune, and awards for their many TV specials.

If you said the Peanuts Gang—you're right.

So far, there have been some 42 TV specials featuring Charlie Brown, Lucy, Linus, Woodstock, and of course, Snoopy. Thanks to some very creative people, the comic strip characters have come to life as characters who walk, talk, sing, and dance.

Bringing the gang to life on the tube is no easy matter. It's an incredible amount of work. Most people don't realize it, but movie and TV cartoons are drawn by hand. A 30-minute cartoon needs as many as 30,000 drawings to make it work. And even more mind boggling: There are 24 separate drawings for each *second* of film!

3-2-1 CONTACT wanted to find out just who makes Snoopy and the rest of the crew move—and how they do it. So we spoke to the Peanuts cartoon-maker himself, Bill Melendez. He has been an animator—a person who gives “life”

to drawings—for almost 50 years.

“When Charles M. Schulz—the creator of the Peanuts comic strip—asked me to do the TV cartoons, I was a little worried,” Bill told 3-2-1 CONTACT. “I had to learn to animate—give life to—the characters the way Schulz would. That's kind of difficult when you've been drawing things in your own style for so many years.”

You've probably seen samples of Bill's style. He worked on such famous movies as “Snow White,” “Pinocchio,” “Dumbo,” and “Bambi.” Bill also drew characters such as Bugs Bunny and Daffy Duck for TV and movie cartoons.

“I've been drawing since I was a child. As a kid, I used to read books and picture how the characters would look,” Bill explains. “It's so satisfying to take a blank page and draw something that has life. We can create any emotion by just drawing it.

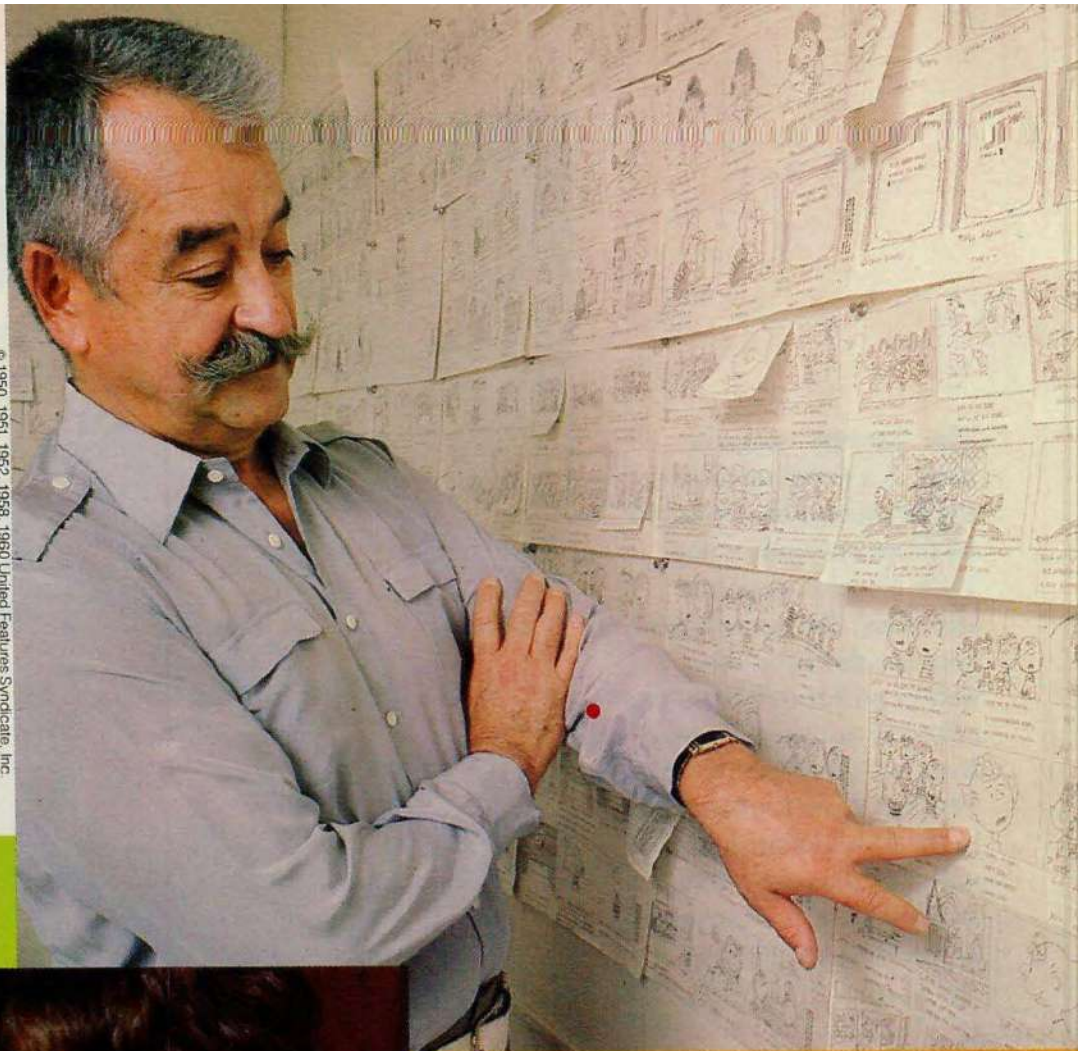
“Here, take a look. This is how we put a cartoon special together.”



## The first step is the story.

"First, Charles M. Schulz gives us his story idea," says Bill. "Then, I make a series of drawings that show important points in the story. We call it a storyboard. Each drawing has the words spoken by each character underneath it." Placed end to end, the storyboard sheets look like two months' worth of newspaper comic strips. Here Bill is working on a storyboard sheet from "You're a Good Man, Charlie Brown."

© 1950, 1951, 1952, 1958, 1960 United Features Syndicate, Inc.

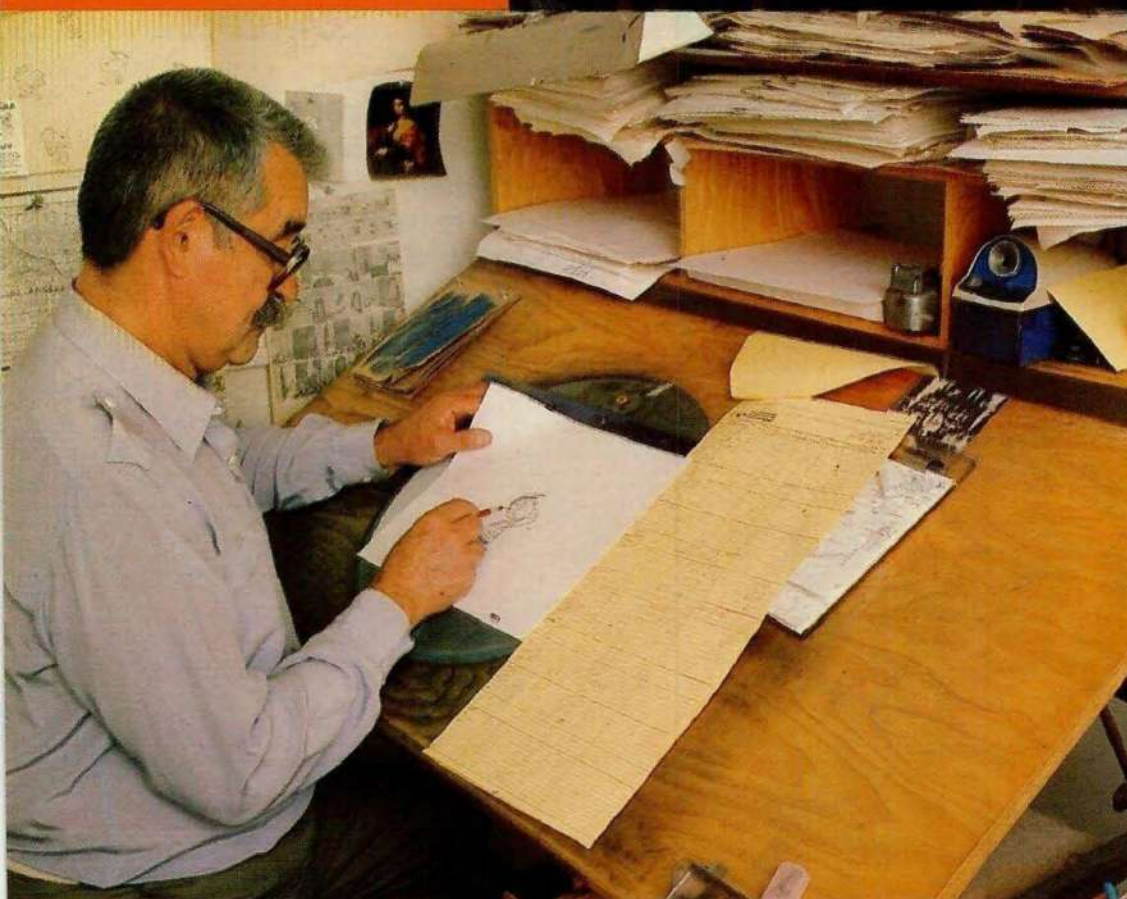
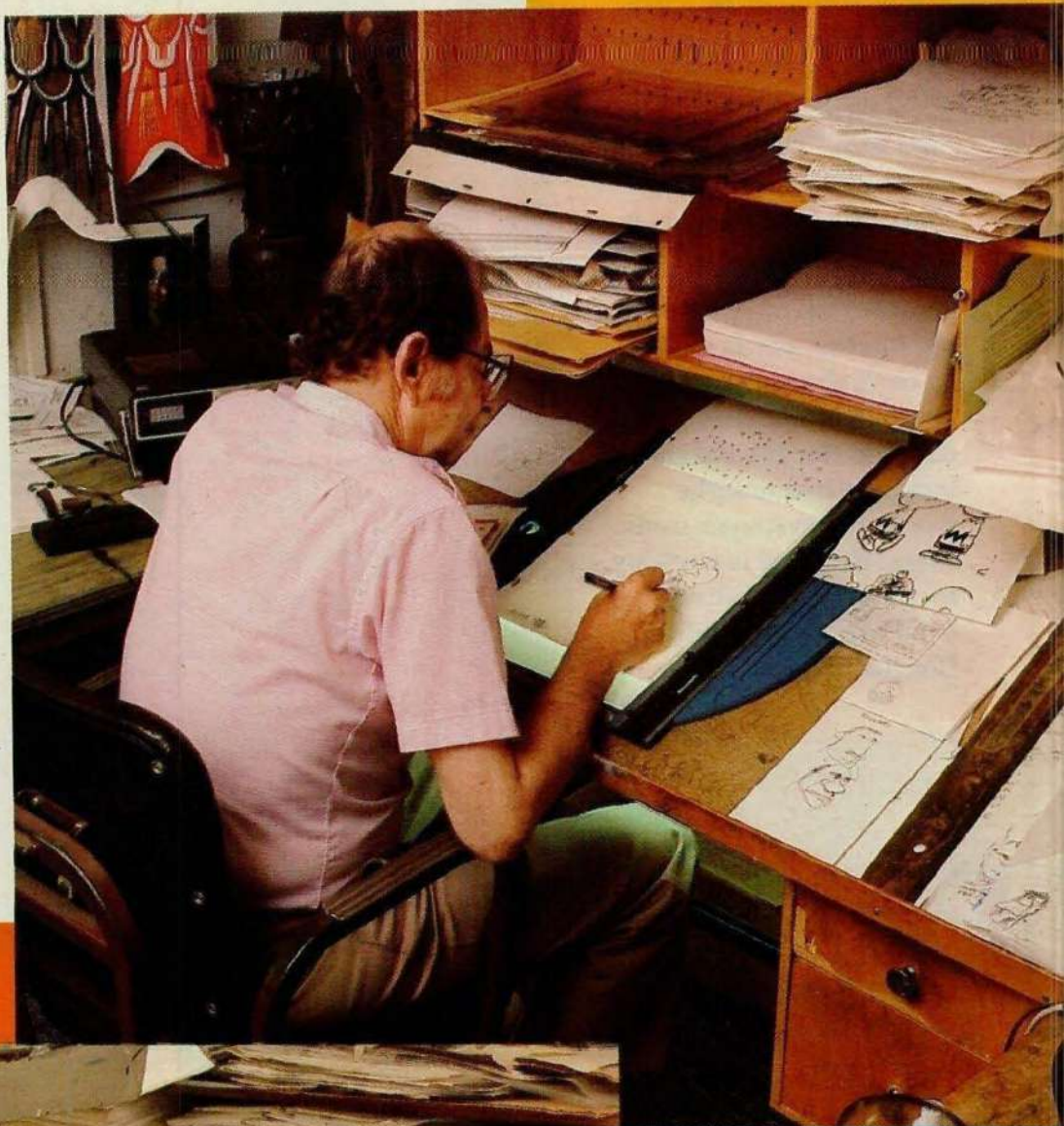


Then the writers write the script. Before the show is put together, the actors are chosen to record the voice of each of the Peanuts characters. "We use kids to do the voices," Bill explains.

PHOTOS © JOHN LIVZEY



The "layout" stage is next. An artist outlines the drawings that need to be done for each scene. With a series of quick sketches, the layout person decides how the action will move from one scene to another. Here, Bernie Gruver shows the Peanuts gang looking up to the sky. Bernie's layout calls for the camera to move from the characters to the stars in the sky.



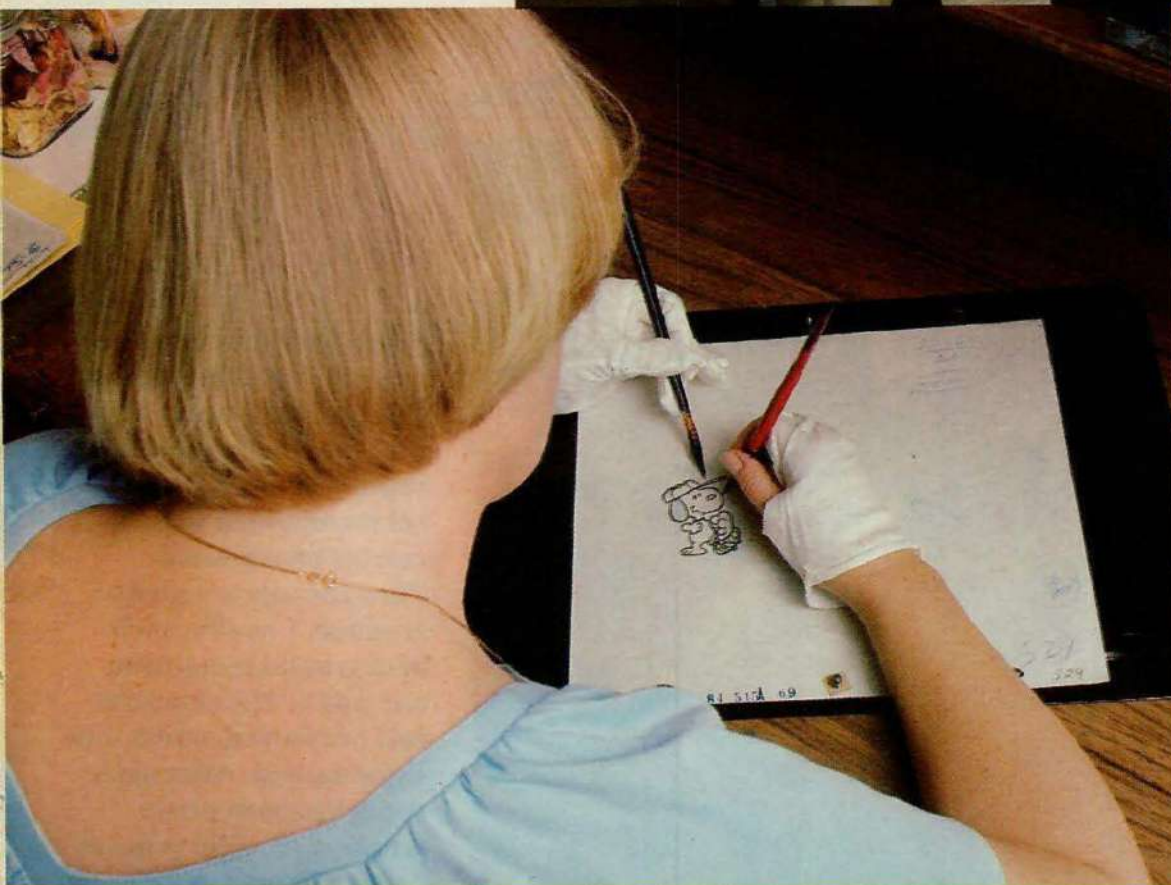
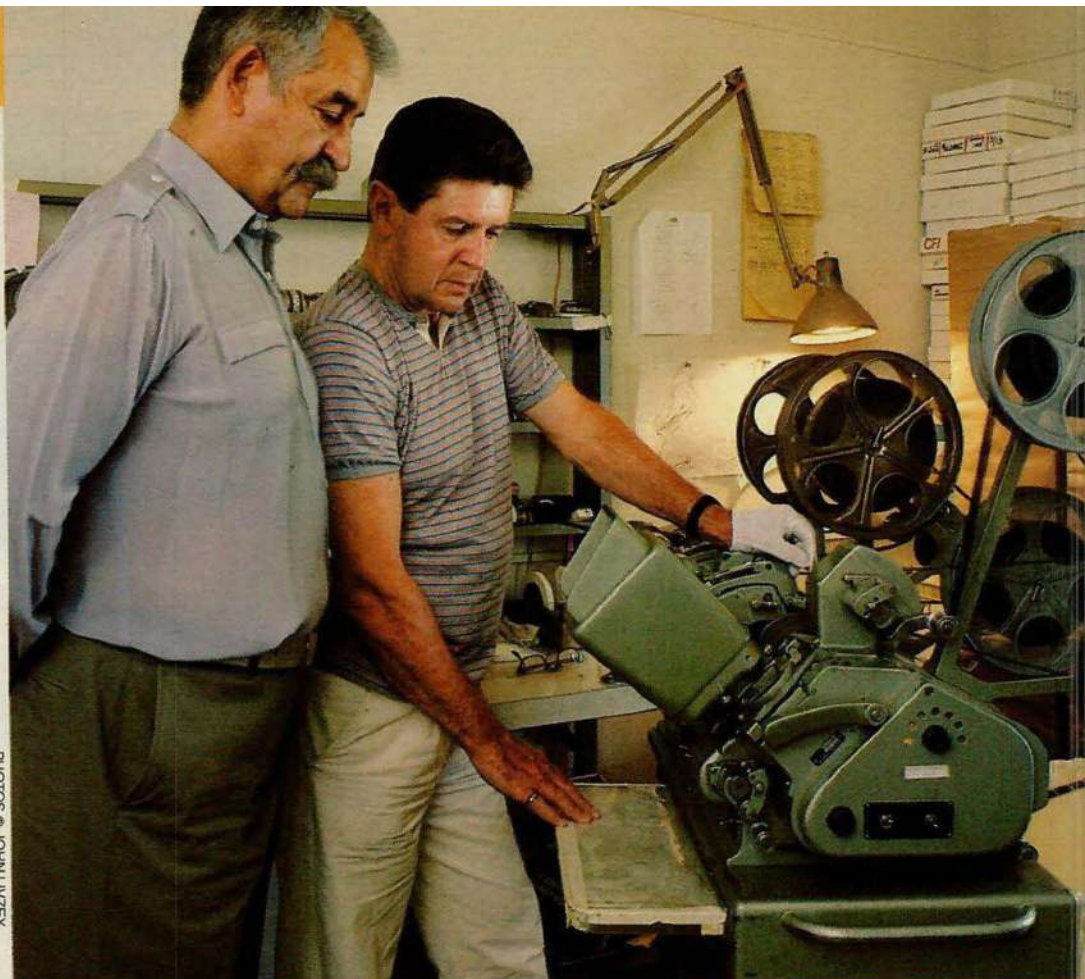
Next, an artist makes a series of pencil drawings for each scene in the film. Each drawing is slightly different than the one before. Here Bill compares a series of drawings he's just done. This is to see if the action is smooth. "When you flip these drawings," says Bill, "the characters jump to life."

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**"When we're satisfied with the pencil drawings, a cameraman photographs each sheet of paper with a motion picture camera," notes Bill. An artist uses a special projector, called a moviola, to look at the film.**

PHOTOS © JOHN LIVZEY

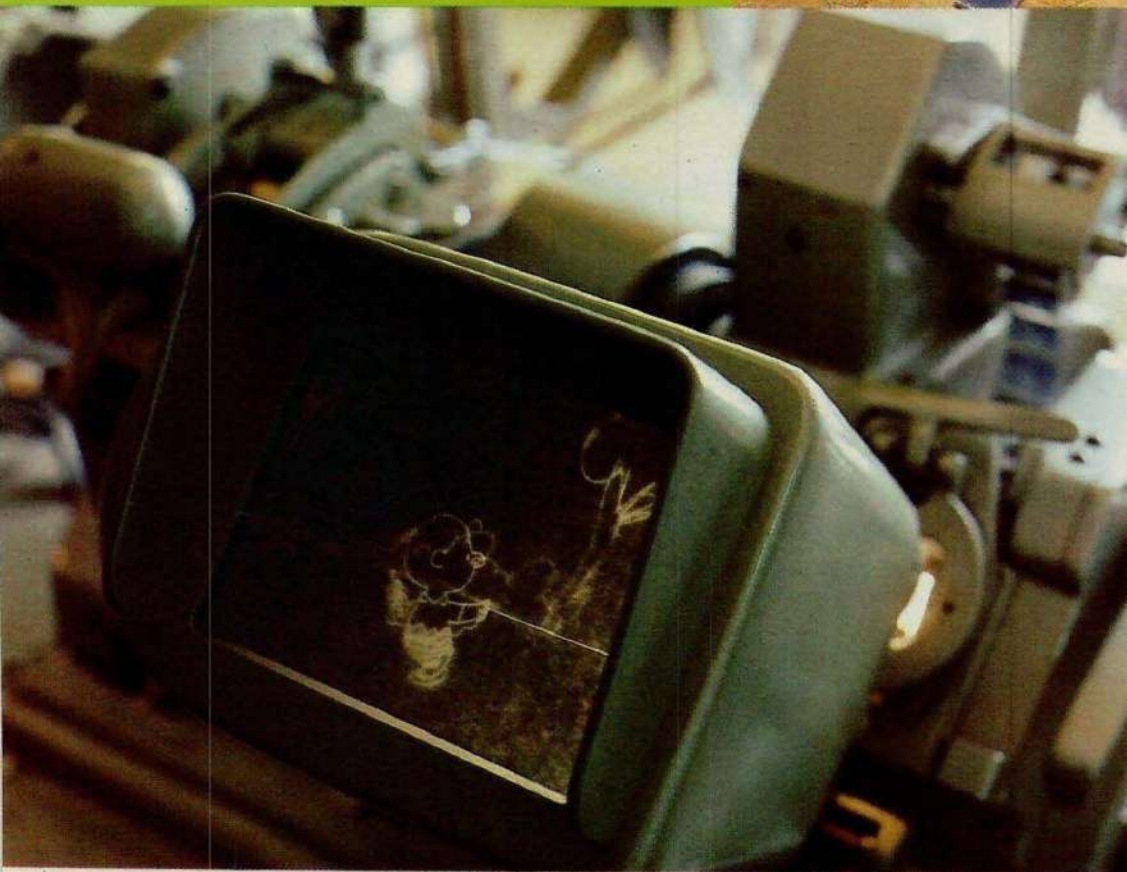


**After everyone okays the test film, an ink tracing is made from each pencil drawing. The ink is placed onto a clear sheet of acetate (a kind of plastic). Each piece of acetate is called a "cel." Here, Karen Holmquist, draws a Snoopy cel. "She has to wear white cloth gloves so she doesn't scratch the delicate acetate," Bill tells us.**

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Each cel now goes to a painter and gets some color. Jane Gonzalez carefully paints in the inked cel. While the character cels are being drawn, other artists work on the background for each scene. Character scenes and background scenes are always done separately. The backgrounds are painted on paper.



When both the character cels and backgrounds are finished, they are sent to a motion picture photographer. Each character cel is combined with the correct background. Then the cels are photographed. Usually, each background remains in one place. The character cels are moved across it to show motion. After each scene has been photographed, the film is developed, returned to Bill's studio, and checked. Here, Charlie Brown is walking through the woods.



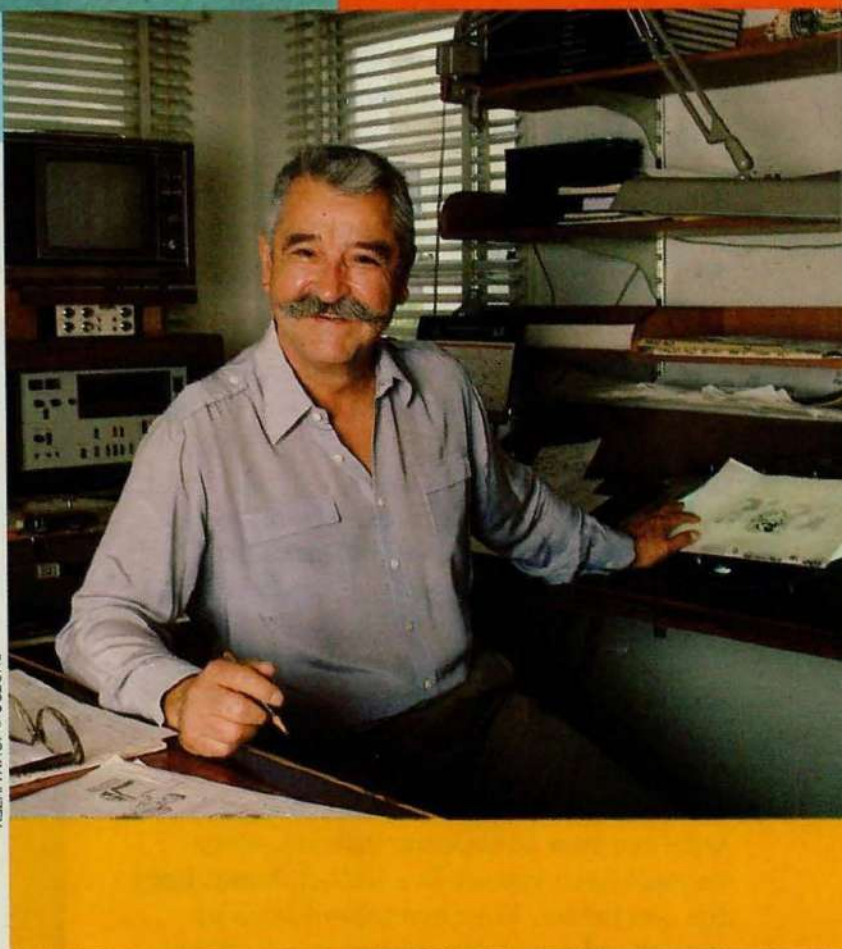


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The cartoon is now ready for music and sound effects. "Musicians and sound effects people record these sounds on tape. They watch the cartoon on a screen and record it at the correct moment," explains Bill. Next, the "soundtrack" (the music and effects) is switched from tape to the film itself. This is called "dubbing."

At last, says Bill Melendez, after six months of work, Charlie Brown, Snoopy, and the rest of the Peanuts characters have made it. They've gone from an idea in the head of Charles M. Schulz to a TV special. The people who put the special together are like a bunch of old shoe cobblers, says Bill. "We're craftsmen who take pride in a well-made product." And that product has delighted hundreds of millions of people.

PHOTOS © JOHN LIVZKY





# Experiment

## Eye Fooled You!

You can make your eyes play tricks on you. Try building the four eye-foolers on the next page.

### What You Need

Scissors, tape and a sharp pencil.

### What You Do

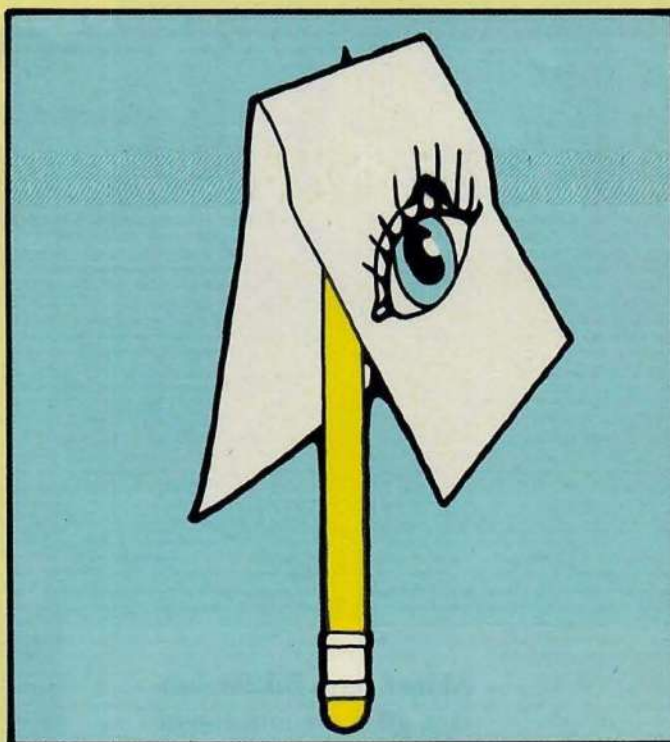
1. Cut out the paper strip on the other page that has two birds on it. Cut along the cut lines. Carefully fold the strip in half along the fold line.
2. Poke the tip of the pencil through the center of the fold line, as in the picture. Now tape the bottom of each side of the picture to the pencil.
3. Twirl the picture back and forth between your fingers, as in picture #2. What do you see? Try twirling the pencil slower and faster. Does that make any difference?
4. Make the other three eye-foolers the same way. See how well you can get them to work.

### Why It Works

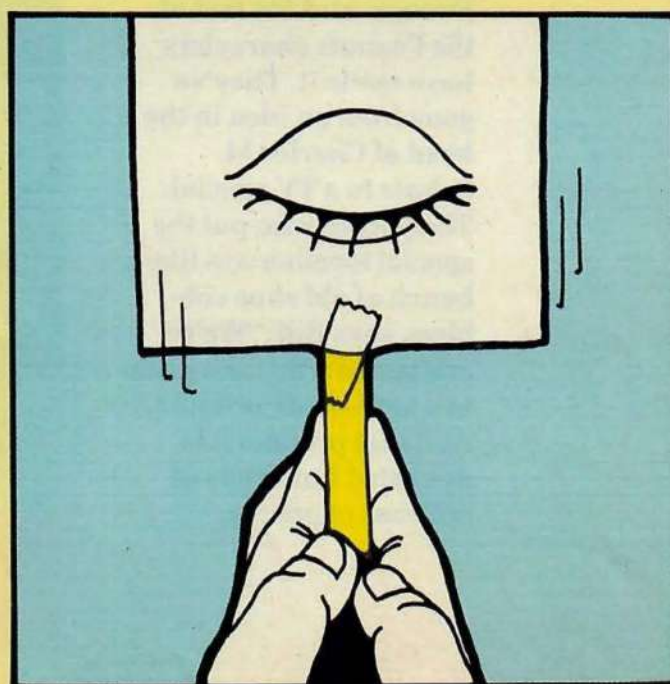
When you spin the pictures, your eyes cannot keep up. The result is an optical illusion. Your brain is still remembering the first picture, when the second one comes around. Instead of seeing the two separate pictures they are combined. It almost seems like they are moving.

The same things happen when you go to the movies. When you watch the screen your eye sees 24 separate pictures every second! Each picture is a little different from the one before. Your eye cannot keep up with the pictures. Your brain mixes them together and it seems like they are moving.

1

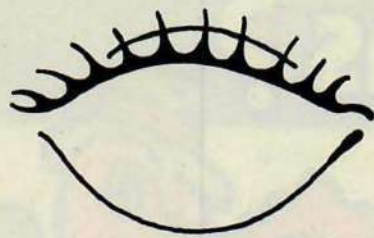


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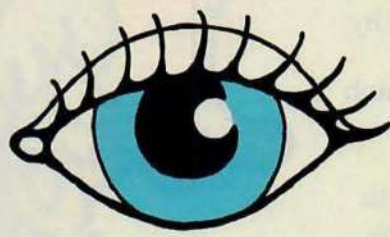




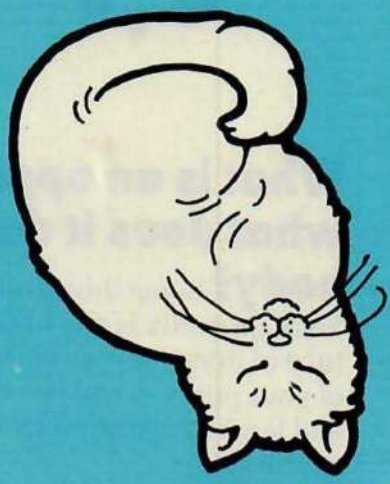
CUT



FOLD



CUT



FOLD



CUT

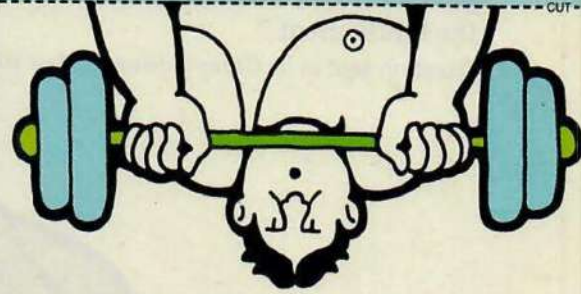
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FOLD



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FOLD



CUT



# Any Questions?

by Michele Lyons

## Why does a turkey have dark and light meat?

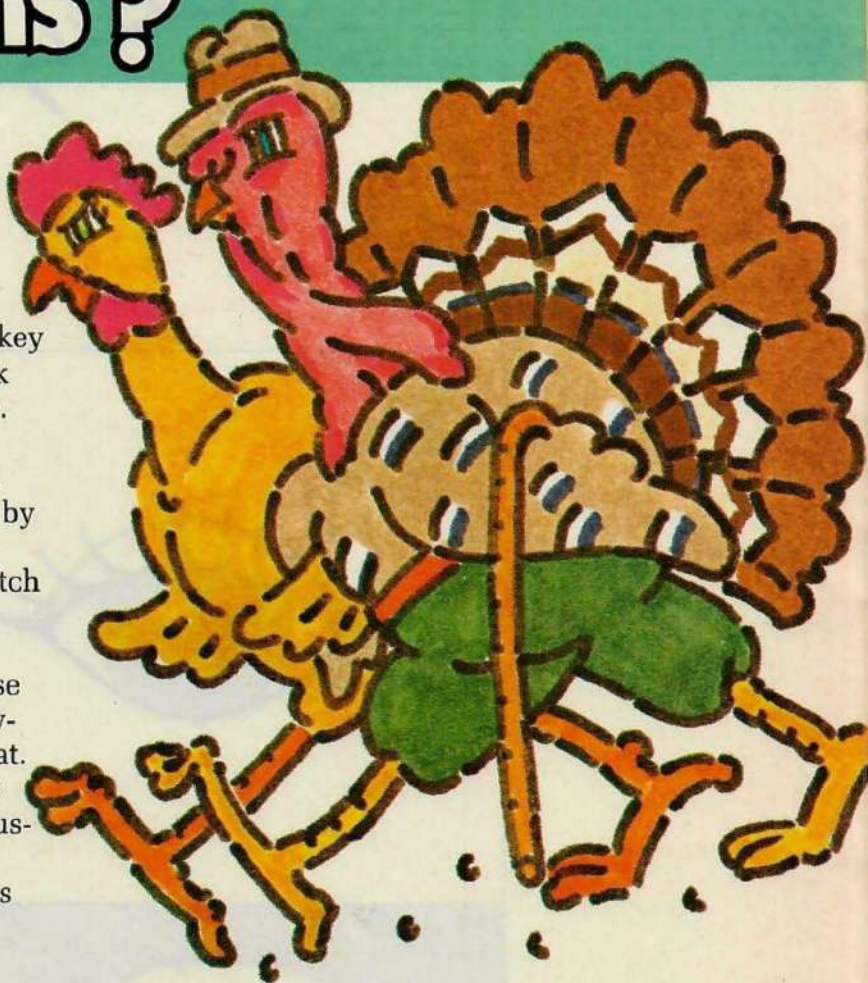
Grab a drumstick if dark meat is for you. If white meat makes your mouth water, reach for a turkey breast. No matter which type of meat you sink your teeth into, you're taking a bite of muscle.

Some meat is dark and some meat is light because the muscles are different in different parts of the turkey's body. And that is caused by the amount of work the muscles have to do.

Turkeys and chickens walk a lot. They scratch with their feet, and bend their necks to eat. These parts of their bodies get more exercise. That means more oxygen and blood go to these body parts. The substance that carries the oxygen helps create darker muscles and dark meat.

Turkeys and chickens don't fly around like some other birds. So their wing and breast muscles don't get much of a workout. And that's great news for all of you who like to say, "Pass the white meat."

Question sent in by Ginny Edwards, New York, NY.



## What is an appendix and what does it do for your body?

Some things are good for nothing. Your appendix is one of them. This two-inch tube of intestine-like material is about the size of your pinky. It can be found where the small and large intestine meet. That's just below your stomach.

The appendix might have once been useful. Some people think it might have once helped the body digest a material found in plants. Nowadays, people don't need their appendix. In fact, you never even feel it—unless a piece of body waste, like an orange pit, gets stuck in it. Then it causes trouble! It gets infected and swollen and it can HURT! In some cases, an operation is needed to take the appendix out. But that's no big deal. It's a part of the body that nobody misses after it's gone.

Question sent in by Jimmy Reeves, Grand Rapids, MI.





Do you have a question that no one seems able to answer? Why not ask us? Send your question, along with your name, address, and age, to:

**Any Questions?**  
**3-2-1 CONTACT**  
P.O. Box 599  
Ridgefield, NJ 07657

## How do cassette tapes record your voice?

If you said it once, you can say it again and again...as long as your words are on tape.

Cassette tapes can talk back to you because they have tiny particles of a substance called iron oxide on them. When you talk into the recorder, your voice sends an electrical signal to a magnet just above the tape. The signals make the magnet force the particles of iron oxide into certain patterns. Each sound moves the particles in a different way. The sound of "a" forces them into one pattern. The sound of "b" forces them into a different one, and so on.

When you set your recorder on "play," the tape passes over a device called a head. The patterns of the iron oxide particles are read by the head and changed back into electrical signals. This sound travels through the speakers and comes out as something that you recognize right away. Your own voice!

Question sent in by Lawrence Estey, New Albany, IN.



ILLUSTRATIONS © BOB DELBOY

## Why does February have only 28 or 29 days?

February seems like an oddball month because it's shorter than the rest. But 2,500 years ago, on the ancient Roman calendar, February had 30 days. A Roman leader called Julius Caesar changed that. He wanted July, the month named for him, to have 31 days. So he took a day from February. The next leader, Augustus Caesar, wanted his month of August to be as long as Julius's. So he grabbed a day from February, too. That left 28 days (or 29 at leap year).

Why did everyone pick on February? Though the year has always had  $365\frac{1}{4}$  days, the months have not always fallen the way they do now. In early Rome, February was the last month of the year. It was the time that Romans held many gloomy rituals to prepare for the new year. It made sense for Roman leaders to take days away from February. They wanted to make this month as short as possible.

Question sent in by Robert Wallace, Brooklyn, NY.





# Desert of Ice

## A VISIT TO THE BOTTOM OF THE EARTH

by George Orick



Welcome to a big continent with no nations, no armies, no governments, no factories, and no farms. Welcome to a continent that is the coldest and most remote place on earth. Welcome to Antarctica. It's 3,000 miles across, and near the center is the South Pole.

For scientists, Antarctica is one of the most fascinating places in the world. Fifteen nations send scientists there. Whatever they learn and discover is shared by all nations.

Some American scientists live and work at McMurdo research station. The five orange buildings were brought to Antarctica in pieces and then put together. Each building is heated by oil so it's nice and warm inside for the 18 scientists who work there.

As soon as visitors arrive at McMurdo, they see the vast frozen mountains of Antarctica. In the distance, a volcano sends steam and smoke into the sky. The air is crystal clear and icy cold. The sky is a brilliant blue. Ice is below, above, around, and as far as the eye can see.

Ninety percent of the world's ice is in Antarctica. Ninety percent of earth's fresh water is fro-

zen in that ice. The ice stretches across the land, and in places it's three miles thick. Imagine the United States covered with ice from coast to coast, with just the tops of the Rocky Mountains poking through. That's what Antarctica is like!

But the ice doesn't just sit there. It is always moving very slowly. The snow and ice are so heavy that the top layers put pressure on the bottom. This makes it move at about 30 or 40 feet a year. Because of that movement, the marker for the South Pole has to be changed every year.

This time it's mapmaker Loreen Utz's turn to move the marker. She had found the exact location of the Pole by using readings from a satellite thousands of miles in space.

When she had finished moving the bamboo pole, Loreen walked around the marker and joked, "There, around the world in 10 seconds!"

The temperature the day Loreen moved the marker was about 30 degrees below zero Fahrenheit. That was in December, the Antarctic summer when the sun never goes down. It moves around the horizon, and it's just as bright at



**Left:** Summer in Antarctica. The midnight sun shines on an ice-breaker as it sails through McMurdo Sound.

PHOTO: BRUCE COLEMAN/© DOTTE LARSEN



**Above:** McMurdo is not only the home of U.S. scientists, but also navy pilots, and others.

**Below:** Scientists dress in four layers of clothing and wear sunglasses to protect their eyes from the harsh winds and the bright sun.



midnight as it is at noon.

In winter, the sun never comes up and the temperature drops as low as 120 degrees below zero Fahrenheit.

## The World's Biggest Desert

Most people would think that with all this cold and ice, there must be a lot of snow. But actually there's hardly any snowfall. The air is so dry and cold that there is very little moisture in it. So the South Pole gets only about six inches of snow a year. As a matter of fact, Antarctica is the biggest, driest desert in the world. It's even drier than the Sahara.

Where the mountains poke through the ice, and in valleys where there is no ice at all, geologists are studying how the ice moved millions of years ago. They trace the patterns the ice carved in the cliffs and rocks.

George Denton, a geologist, says the trail of the ice through the mountains is a record of times past. "It's a kind of book the geologist reads to understand the history of the ice."

The ice formed in Antarctica at least 15 million years ago. There were times when it covered all the mountains except the very highest. But it has stayed pretty much the same for about the last 6,000 years.

The geologists are very careful in the way they work. George notes, "We leave the environment in the same shape we found it." ➡

PHOTO: BLACK STAR/© EMIL SCHULTHEISS



# Antarctic Research Stations

- |             |                  |                |
|-------------|------------------|----------------|
| ● ARGENTINA | ● JAPAN          | ● SOUTH AFRICA |
| ● AUSTRALIA | ● NEW ZEALAND    | ● SOVIET UNION |
| ● CHILE     | ● UNITED KINGDOM | ● WEST GERMANY |
| ● FRANCE    | ● UNITED STATES  |                |



are also studying and recording the seals' underwater calls. Each seal makes at least 20 different sounds, from whistles to grunts, and the young men and women taping them are trying to understand their language.

Lisa Ferm is a scientist studying seals. She explained that their language changes from seal colony to colony around the continent, even though they are the same kind of seals. "They 'speak' differently," she said, "but we don't know exactly why yet."

Of course, scientists must be warmly dressed and they must carry all the right equipment. They are dressed in four layers of clothing, four layers of gloves, and warm boots.

For Antarctica has the most dangerous weather on earth. Howling winds blow the snow across the continent. The blue sky can turn milky white in an instant. Then you can't see the horizon, or figure out the size of objects or how close you are to them. At all times every vehicle carries extra clothing, tents, signal

ILLUSTRATION © JOI LYNN CRABS

On other mountains, above the ice, biologists have found fossils of tropical animals and trees that lived millions of years ago. Their discoveries tell them that Antarctica once was covered by rich tropical forests—millions of years before the ice came.

One biologist, George Simmons, has made one of the strangest discoveries of all. He cut a hole through 15 feet of ice over a freshwater lake. By going down in a warm diving suit, he found layers of a tiny form of life that he believes are the same as the first forms of life billions of years ago.

George Simmons said, "There's no place else on earth you can study this kind of thing."

## Tracking Seals

Of course, higher forms of life also live in Antarctica. Seals and penguins live at the sea edge. Scientists are studying the seals, tracking their movements under the ice with radio transmitters attached to the animals' fur. The scientists

**Right:** Scientists discovered a crack in the ice the size of a 9-story building. The layers of ice give clues to Antarctica's past.

PHOTO: BLACK STAR © EMIL SCHULTHEISS







**Left: Ice Dancing!**  
No, it's just a scientist trying to figure out the best way to catch a penguin. Scientists study penguins to see how they breed.

PHOTO, UNIPHOTO PICTURE AGENCY © MARTIN ROGERS

**Below:** Dressed in a warm diving suit, a scientist is lowered through a hole in the ice. Tiny forms of life, similar to early life-forms, live in the freezing water.

flares, food, and extra radios.

People must check in by radio every time they go out. They must tell a central radio dispatcher how many people are in the car, where they're going, and when they expect to come back. That's what travel is like in Antarctica, even for a couple of miles. And if you don't check in when you're expected to, the dispatcher sends rescuers. It's that dangerous.

But the men and women who drive strange vehicles with tires 10 feet high are not frightened. They have all had survival training, and they look out for one another.

Every June, in the deepest dark of winter, a cargo plane flies over the South Pole station. It drops packages by parachute. These packages contain medical supplies, scientific equipment, mail, fresh food, and always one watermelon.

Each year, the watermelon smashed as it fell. This year, though, the watermelon landed safely. So there, in the frozen desert of Antarctica, the scientists celebrated with a watermelon picnic—indoors, of course!

PHOTO, PHOTO RESEARCHERS © RUSS KINNE





# Penguin Pin-Up



**T**he penguin's black and white feathers provide protection against enemies. If the enemy is hunting from above, the black feathers blend with the dark ocean. If the enemy is coming from below, the white feathers can't be seen against the water.

**W**hen penguins mate, they bow and dance. All that fancy footwork pays off. Each year, the pair of birds returns to the same spot where they mated the year before. Their sense of direction is amazingly sharp.

**P**enguins are birds, but they can't fly. They're real good swimmers, though, spending up to nine months a year in the water.

**T**he Emperor penguin can dive deeper than any other bird...over 800 feet! Penguins walk, swim, or slide across the ice on their bellies.





**T**here are 18 different species of penguins. They live in Antarctica, South Africa, Australia, New Zealand, and in some parts of South America.

**T**he penguins' diet is made up of shrimp-like krill and fish. Penguins never eat while they're on land. So they live off the layer of fat that they grew while dining at sea.

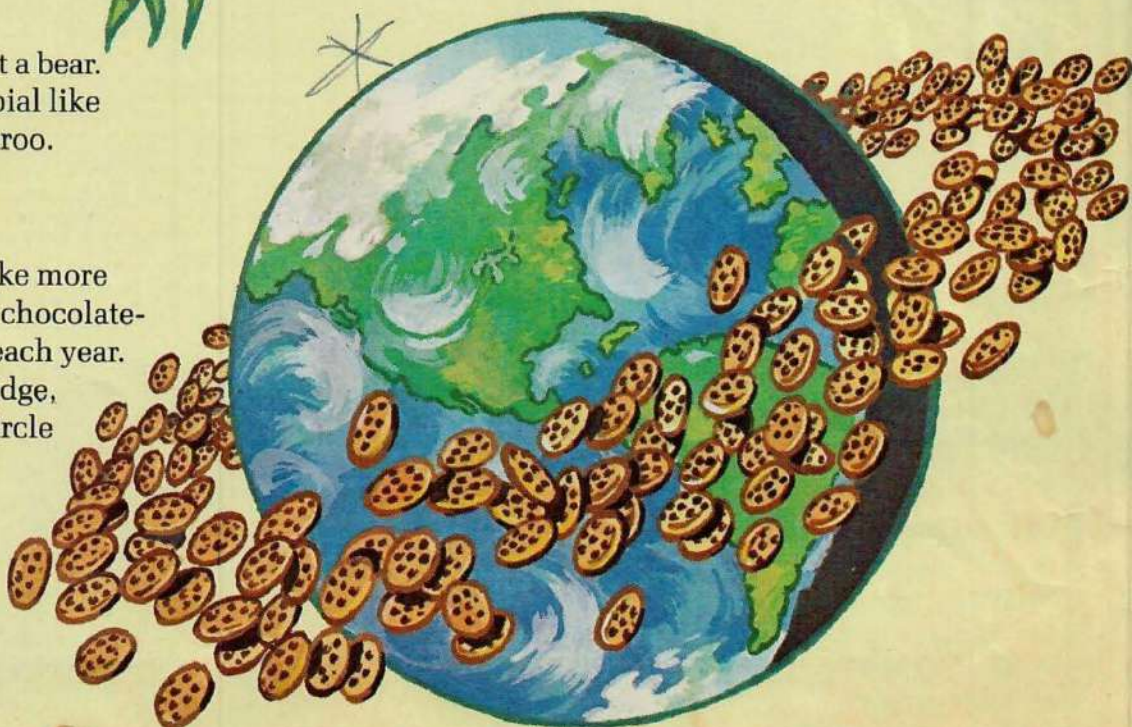


# Factoids



A koala is not a bear.  
It is a marsupial like  
the kangaroo.

Americans bake more  
than 7 billion chocolate-  
chip cookies each year.  
Laid edge to edge,  
they would circle  
the world  
nine times.



ILLUSTRATIONS © JOHN NEZ

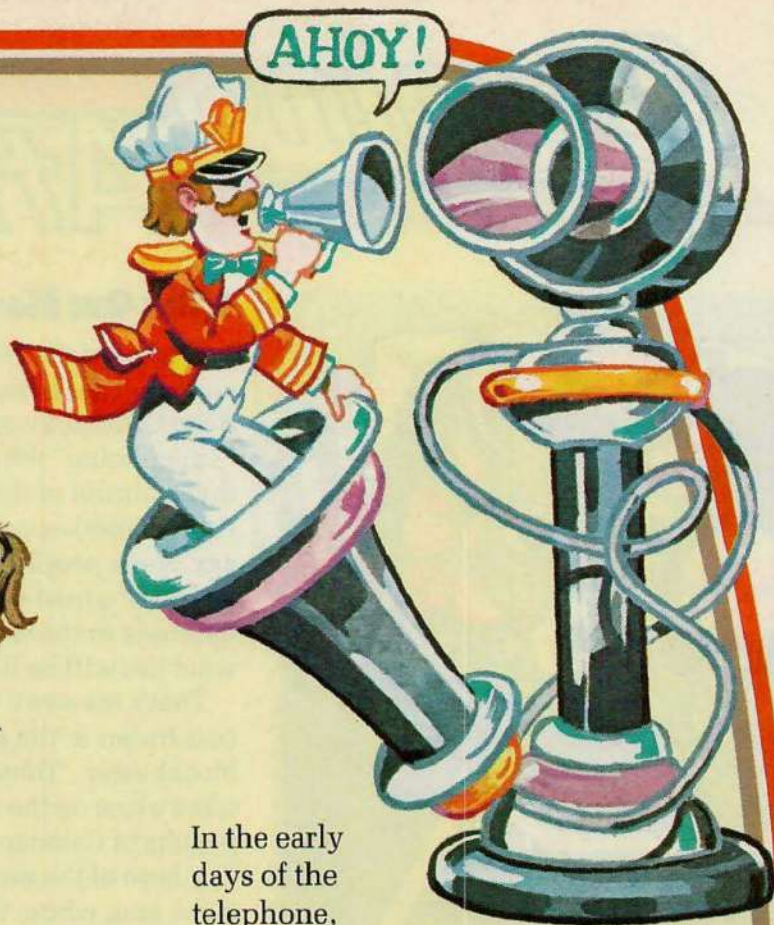
Pogonophobia is the fear  
of beards.

A cricket can  
jump 20 times  
the length of  
its own body.





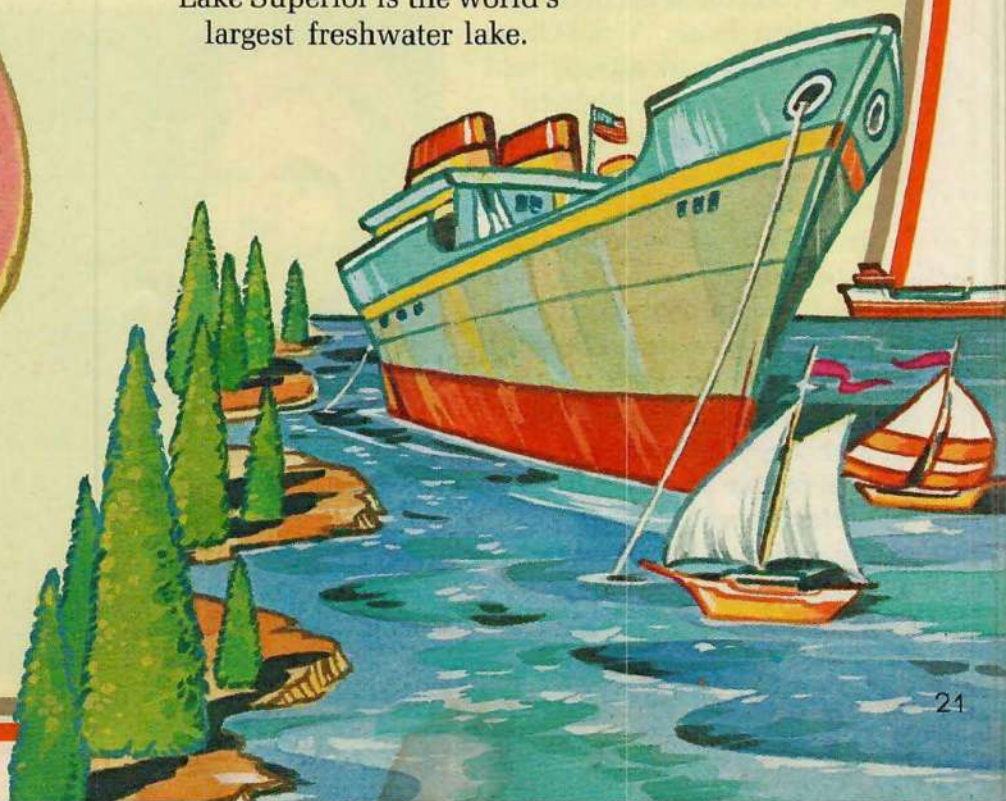
The highest recorded U.S. temperature was 134 degrees F. in Furnace Creek, California.



In the early days of the telephone, "Ahoy, ahoy," rather than "Hello" was to be the greeting.



Lake Superior is the world's largest freshwater lake.





# Coming Attractions



## Adopt-a-Burro

Is there a burro in your future? Some people are seriously considering it! What's the story?

The National Park Service discovered that it had more burros in Death Valley National Park than it knew what to do with.

"The burros are causing trouble by eating the same plants as the bighorn sheep," Virgil Olson, a Death Valley park official, told CONTACT. Since the bighorn sheep are native to the area (and burros are not), U.S. officials decided to remove the burros. This would leave more food for the sheep.

The Fund for Animals agreed to take the burros out of Death Valley. Now more than 2,000 burros have been moved. Many of them need a good home. So a lot of people are helping by adopting a burro.

For information, you can write to: **Fund for Animals**  
200 West 57th St.  
New York, NY 10019

## A Far Out Movie

ILLUSTRATION © LESLIE DUFFY NASH

A mysterious red juice turns enemies into human computers. Secret groups await the birth of a "super-being" who will give them control of the universe. And in another part of the galaxy, some people pray for the arrival of a man who will end the darkness in the world. Is this what life will be like in 10,091?

That's the story told by Princess Irulan in the science fiction blockbuster, "Dune." The movie takes place on the make-believe planets of Caladan and Arrakis. The hero of the movie, Paul, is the man whom the people believe will give them power.

Paul uses his power wisely. But will he succeed in his mission and bring the universe out of darkness? Will he win his battle against Feyd, his enemy? And does Paul realize that in real life, Feyd is Sting, the lead singer for The Police?

You'll have to go to the movies to unravel this twisty plot!



PHOTO © UNIVERSAL CITY STUDIOS, INC.



ILLUSTRATION © RON LIPKING

## Computers and Crime

The streets of San Francisco are becoming a bit safer. That's because the police there are getting help in solving crimes from a machine. Computers are helping the cops to compare fingerprints left at the scene of a crime with some three million prints stored in a databank.

Before computers came on the scene, detectives had to spend months looking through files trying to match prints. Now, the computer can choose a few prints from the millions in the databank in less than an hour. Even slightly blurry prints can be enlarged by cameras, and fed into the computers for matching.

"Because we can trace fingerprints more quickly, we can arrest criminals who would escape us," says police captain Henry E. Eidler. That's good news for people in San Francisco.

## Playing Tricks on Mother Nature

Mother Nature is having some tricks played on her. A horse at the Louisville (Kentucky) Zoo



gave birth to a zebra. And at the Cincinnati (Ohio) Zoo, an African antelope gave birth to a bongo—a type of antelope.

What? Doctors placed a fertilized zebra embryo in the horse. And they placed a fertilized bongo embryo in the antelope.

Animal experts and zoo officials are delighted with the results of these two births. "By taking a fertile embryo from one animal and placing it in another, we can help save species from dying out," says one official at the Louisville Zoo.



PHOTO © BILL BALLEBERG

## To Market, To Market To Buy a Robot

Will robots be working in your neighborhood supermarket someday? They most likely will. In fact, some robots are practically running a market in Japan right now.

At a large grocery store there, robots unload trucks, control the cars in the parking lot, and even slice food behind the meat counter.

Because the store uses "robot

ILLUSTRATION © PHIL ANDERSON



power," human workers have time to help customers search out groceries on the shelves. Meanwhile, in another room of the store, kids are busy playing video games.

So far, shoppers are pleased with the supermarket. And the workers claim they enjoy having more time to spend with their customers.

## Fuel for Thought

What are some of the latest materials that scientists are experimenting with in the search for future fuels?

In California, some people are going nuts over walnut shells. Last year, the folks burned enough shells to equal some 70,000 barrels of oil. They've used the fuel to heat their homes and run their businesses. Besides walnuts, people are burning olive, peach, and prune pits.

No one claims that shells and pits are going to be the fuels of the future, but they are one way of taking a waste product and making it useful. A peachy idea!

## Future Driving May Be Safer

The U.S. government has decided that by 1989, all cars sold in the U.S. will come with automatic air bags. The bags—which are connected to the steering wheels—inflate when the car is hit from behind. This will keep front seat passengers from hitting the windshield during an accident.

If lawmakers in two thirds of the states vote to require passengers to wear seat belts, the air bag law would end. Many states are expected to do this. But either way—air bags or seat belts—driving will be a lot safer.



PHOTO COURTESY OF FORD MOTOR COMPANY

## So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science stories that have to do with the future (which could even be next week!). Send stories to:

**Coming Attractions**  
P.O. Box 599  
Ridgefield, NJ 07657



# The Bloodhound Gang™



ILLUSTRATION © BRAD HAMANN

## The Case of the Stagestruck Elephant

by Michael J. Dayton

The Bloodhound Gang was sitting in the bleachers of the Bingham Brothers Circus, waiting for the show to start. Earlier that day, an envelope had arrived at the Bloodhound Detective Agency. Inside were three passes to the show. On the back of one ticket was this note:

HELP! SOMEONE IS TRYING TO RUIN ME.  
I'LL LOSE EVERYTHING IF YOU DON'T HELP.  
P.S. TRY ONE OF OUR FOOT-LONGS—THE  
BEST HOT DOGS IN THE WORLD.

"I wonder what sort of mystery could take place here at the circus?" Vikki wondered.

"They probably want to know where all the

audience has gone to," Skip replied.

The bleachers were only half-filled. But the performers put on an energetic show.

First came Mylar the Magnificent, the star of the flying trapeze. He did death-defying somersault after somersault.

Next came the lion tamer, Rory Harris. With an ordinary kitchen chair, he held off three fierce lions. At one point, Rory stuck his head inside a lion's mouth.

When Harris finished, a small car rolled into the center ring. Thirteen clowns climbed out. They juggled milk bottles, swallowed swords, and threw pies at one another.



As the clowns left, Wolfe Bingham stood under a spotlight. "Ladies and gentlemen, it's time for the star of our circus," he announced. "Tiny Tina and her half-ton of elephant fun!"

As the lights dimmed, a commotion erupted. An elephant trumpeted wildly. From somewhere in the darkness came a male voice. "Elephant stampede! Quick, everybody run!"

## The Gang Meets Lily

The Gang raced to the back room where all was peaceful. There was one elephant, and a small one at that. The elephant appeared frightened. A short woman, who could only be Tiny Tina, was attempting to soothe it.

The owner, Wolfe Bingham, was arguing with the lion tamer and a bald-headed clown.

"I told you that elephant was dangerous," Harry Shortz, the clown said.

"That's right," agreed Rory, the lion tamer. "It's time you got rid of Tina and that beast."

"What?" exclaimed Wolfe. "This show would collapse without Tina and her elephant."

"There won't be any circus after that elephant tramples all of us!" Rory replied.

Rory and Harry turned to leave. But the lion tamer issued one final warning. "If you don't do something about Tina and that elephant, we're going to quit and join Culley's Circus."

As the clown was leaving, he dropped a handkerchief. Ricardo picked it up. He was about to return it when he noticed some strange hairs on it. He quickly tucked it into his pocket.

"You must be the Bloodhound Gang," Wolfe said. "Thank goodness you've come. Someone's trying to ruin me. If I only knew who—or why."

"Tell us the whole story," Ricardo said.

Everything had been running smoothly, Wolfe told them. Then, problems began to trouble the circus, especially Tina and her elephant Lily. The show would be going fine—until Tina's act. Then something always went wrong.

For instance, one night someone had slipped alcohol into Lily's watering trough. Lily drank the whole trough in a matter of minutes. That night she was simply too drunk to perform.

"Night after night, our best act is ruined. People come to see Lily. When she can't perform, people demand their money back," Wolfe explained.

"Do you know what happened tonight?" Ricardo asked.

"I haven't talked to Tina yet," Wolfe said. "Come along, I'll introduce you."

They walked across the room. Tina had succeeded in calming Lily. She was talking quietly to her.

"I don't know what is wrong," Tina said. "Lily was fine until show time."

"Was anyone else around her?" Skip asked.

"I don't know for certain," Tina answered. "It was at the moment when the lights were dimmed. She's the smartest elephant I've ever trained. I only need to show her a trick once or twice. Then she remembers it. But now she has stage fright or something."

"How did you get Lily?" Ricardo asked.

Tina explained Lily had been a wild elephant in Africa. As a calf, she had strayed from the herd. She was attacked by lions and injured. Doctors had treated her, then sold her to the circus.

"I hate to say this, but if this sort of incident continues..." Wolfe's voice drifted off.

"I'll never get rid of her!" protested Tina.

"There's not much else we can do tonight," Vikki said. "We'll come back tomorrow. In the meantime, I think a little research might help us get to the bottom of this."

"Are we going to the library?" Skip asked.

"No, we're going to the one place where you'll be most at home—the zoo!" laughed Vikki.

"Maybe Jean Jessup can help us with this case."

## All About Elephants

The next morning, the Gang headed straight for the zoo. There they located Jean Jessup. Jean was the zoo curator. She made sure that the animals stayed healthy and got proper care.

"Well, well, what brings my three favorite sleuths this way?" she asked them.

"A big case," said Skip. Skip filled Jean in on Lily and the events at the circus. "So, what can you tell us about elephants?"

"Let's see," Jean said. "Elephants have been used as work animals for centuries. They're usually friendly and gentle—and fairly intelligent. They don't see well, and they're color blind. But they make up for that with a terrific sense of smell and hearing. They can smell their enemies up to a mile away. ➡



"Elephants rarely forget a trick—or an unpleasant experience. In fact, from what you've told me about Lily, I'd almost bet that an unpleasant experience is at the bottom of this."

"Well, that's just great," Vikki said sadly. "All we have to do is get Lily to talk about it. We're no further along than we were before."

"Wrong," Ricardo said. He pulled the handkerchief out of his pocket. "This may be our answer. That clown Harry we were talking to last night dropped it. I noticed something odd. The clown was bald but the handkerchief was covered with hair. Even stranger, the hairs were thick and coarse." Ricardo handed the handkerchief to Jean.

She examined it closely. "No question about these. They're lion hairs."

"That's it!" exclaimed Skip. "Ricardo, you're a genius!"

"Hey, don't I know it," replied Ricardo.

"It's time to hit the big top," Vikki said.

When they returned to the circus, an argument was taking place. Harry and Rory were yelling at Wolfe. Tina stood nearby, just out of earshot.

"I'm telling you, that elephant tried to kill me," the clown said. "I was wearing this red shirt when I walked by her. As soon as she saw the color, she went wild."

The lion tamer joined in. "When I walked by with meat for my lions, Lily grabbed a whole steak from me. I tell you, once those beasts start eating meat, they turn vicious."

Wolfe looked as nervous as a mink in a coat factory. "I guess you're right. Lily is just too dangerous. We'll have to get rid of her."

"Wolfe, there's nothing wrong with Lily," Vikki said.

"That's right," Skip added. "This clown here has been fooling you. And the lion tamer has been just plain lying."

"You don't know what you're talking about," the clown scowled.

"No, you've got that wrong. You don't know what you're talking about," Ricardo said. "Lily never attacked you because of your red shirt. She couldn't have. Elephants are color blind. And elephants don't eat meat. So Lily wouldn't have grabbed your steak and eaten it."

"That means that the two of you just made those stories up," Vikki said.

"Well, I didn't make up the story about Lily going crazy last night, did I?" Harry said.

"No, you didn't," admitted Ricardo. He reached into his pocket and pulled out the handkerchief. "By the way, you dropped this last night." He handed the handkerchief to Wolfe.

## The Gang Saves the Day

"Wolfe, you'll notice that handkerchief is covered with hair—lion hair, not Harry's," Ricardo said. "These two figured out that Lily could not stand the smell of lions. As you remember, Lily was attacked by them when she was a calf. So Rory rubbed the handkerchief across one of the lions. Then he gave it to the clown. Just before Lily's act, the clown waved the handkerchief under Lily's nose. That frightened her."

"So it was you two all along," Wolfe said angrily. "But why?"

"I heard them mention Culley's Circus last night," interrupted Vikki. "I'm sure that has something to do with it."

"That's right, smart aleck," yelled Rory. He turned to Wolfe. "Culley wants Lily and Tina to work for him. He offered us good money to get you to fire her. Good money. Not like the peanuts you pay us here."

"You don't have to worry about your pay anymore," Wolfe said. "You're both fired!"

Wolfe walked over to Tina and Lily.

"As for you, Lily, you've got a permanent job at the circus. At least I know you'll never complain about being paid peanuts."

Lily must have known a bad pun when she heard one. She filled her trunk with water and hosed Wolfe down.

**COMING NEXT MONTH**

**The Case of the  
Sinister Smugglers**




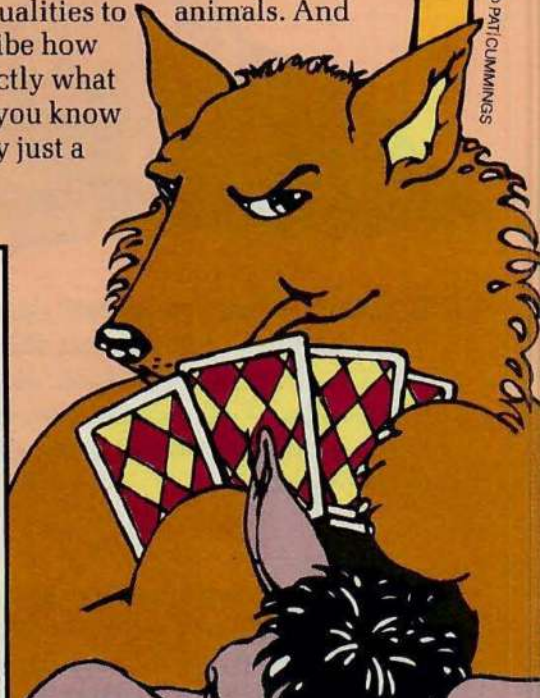



# You Don't Say!

## A CONTACT QUIZ

by Megan and H. William Stine

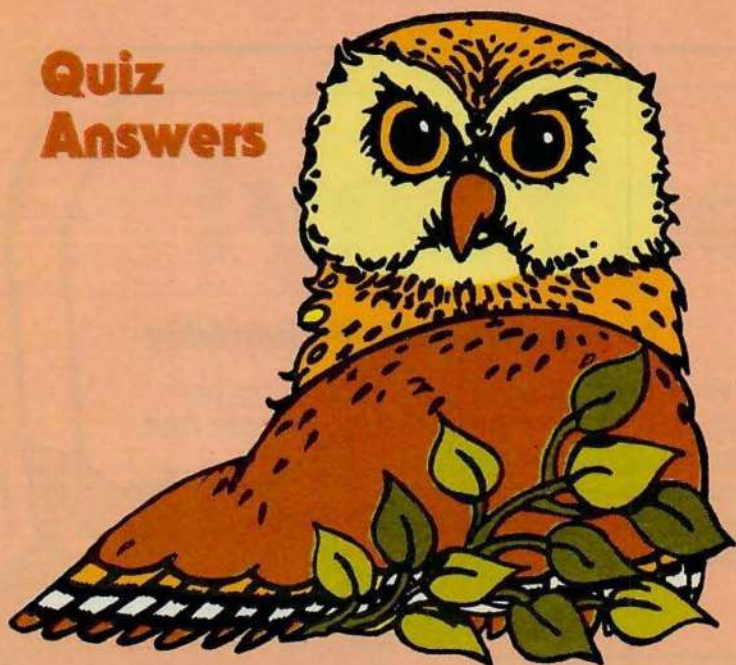
Has anyone ever called you “wise as an owl” or “blind as a bat”? For years, people have made up sayings that give human feelings or qualities to animals. And then people turn around and use these sayings to describe how people act. But are these sayings true or false—and exactly what do they mean? Take this quick quiz and see how much you know about these animal sayings. Are they for real, or are they just a bunch of um—hogwash?

- 
- 
- 
1. Wise as an owl  
**True or False?**
  2. Blind as a bat  
**True or False?**
  3. Memory like an elephant  
**True or False?**
  4. Busy as a bee  
**True or False?**
  5. Eat like a bird  
**True or False?**
  6. Sly as a fox  
**True or False?**
  7. Hungry as a bear  
**True or False?**
  8. Stubborn as a mule  
**True or False?**

Turn the page for the surprising answers.



## Quiz Answers



**1. False** Whoooo ever said that owls were wise? It just isn't true. An owl's big staring eyes do give it a serious, "know-it-all" look, though. And since they can't move their eyes, they have to turn their head all the way around to see what's happening beside them.

**3. True** Circus trainers say that once elephants have learned a trick, they rarely forget it. They also appear to remember past experiences. For instance, an African elephant was being tracked by a hunter. So the animal started walking to a park where hunting is illegal. It was 100 miles away, but the elephant headed there to safety!

When you realize that elephants eat over 700 pounds of vegetation a day, it's a miracle they can even remember what they had for lunch!



**2. False** There are about 900 kinds of bats. And none of them are blind. Many of the larger bats have big eyes and excellent vision. But the smaller bats that live in the U.S. couldn't exactly pass an eye test for a driver's license. So how do they find their way around in the dark? These bats send out high-pitched sound waves. Since objects nearby reflect these waves, bats can locate the objects from their echoes.



**4. False** People think that bees are constantly building hives, gathering nectar, and making honey. But the truth is that many kinds of bees aren't all that busy. As for honey bees, they do keep "busier" than most others. A queen honey bee for instance, lays about 2,000 eggs a day. And worker bees build the hive and keep it clean. They also go out to gather the pollen to make honey. But scientists say that even honey bees spend lots of time wandering around doing nothing at all. In fact, bees hibernate for periods of time.





**5. False** Birds might seem to eat very little since they're so small. Actually though, birds eat like pigs, especially when

it comes time for migration. In the fall, even the smallest birds stuff themselves and put on extra fat for the long flight south. Why? Because some birds make the whole 2,000-mile trip nonstop. That's 60 hours or more of flying—without a dinner break or even an in-flight movie. By the end of their trip, the birds have lost a lot of weight—sometimes even more than they put on by all that extra eating!

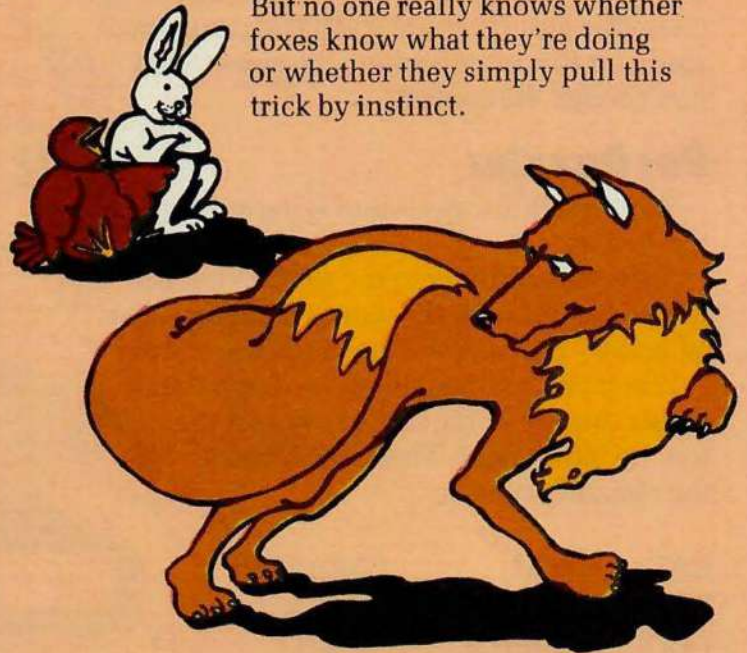


ILLUSTRATIONS © PAT CUMMINGS

**7. True** Just as you would suspect, bears eat a whole lot. In fact, they probably *spill* more than you eat. And their appetites grow larger in the fall. That's when they need to eat huge amounts to build up enough fat to live on during their long winter nap.

Sometimes, though, bears can't get enough to eat before going into hibernation. Then, if a bear gets hungry, it will wake up and come out for a meal. Then it's very hungry—and grumpy. After all, bears don't like to have their hibernation interrupted.

**6. True** How's this for an act that seems sly and sneaky? A fox suddenly starts jumping around, running, and chasing its tail. Rabbits and birds come closer to see the show. Then the fox stops playing and leaps on them. Lunch is served! It seems sly to people that foxes can charm little animals into becoming snack food.



But no one really knows whether foxes know what they're doing or whether they simply pull this trick by instinct.

**8. False** Have you ever seen pictures of people tugging on the reins of a mule that won't walk another step? That's the popular idea of a mule—stubborn as can be. But the truth is that mules are gentle and obedient. They are willing and strong workers. That's why mules are often worked very hard. But if a task becomes too difficult, the animals will stop working. This is self-protection, however, and not stubbornness.





# Extra!

by Rebecca Herman

Extra! Extra! What else can you do, before you close this issue? Lots of stuff! Get your pencil ready for this month's fun and games. And don't forget the contest.

## Pet Puzzler

What pet is always found lying around the house?

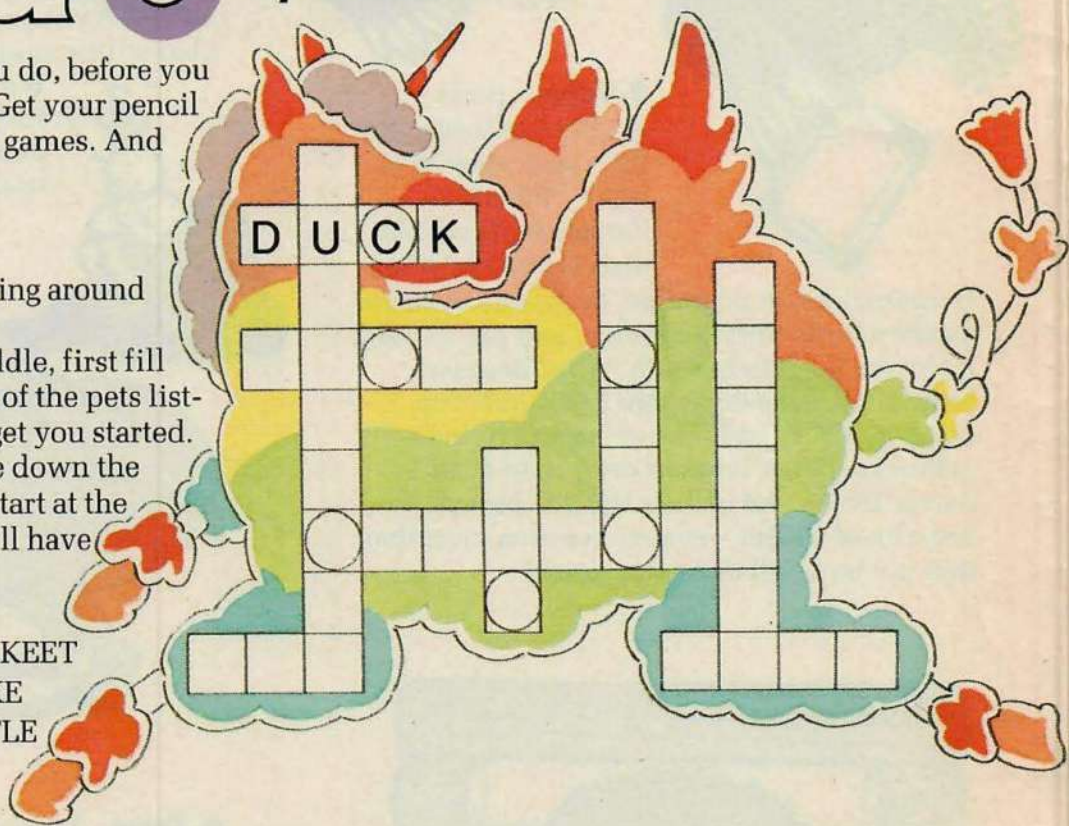
To find the answer to the riddle, first fill in the squares with the names of the pets listed below. We've done one to get you started.

When you're finished, write down the letters that are in the circles. Start at the top. Go left to right. Then you'll have the puzzling answer.

CAT	FROG	PARAKEET
DOG	GUINEA PIG	SNAKE
DUCK	HAMSTER	TURTLE

**Answer:**

\_\_\_\_\_

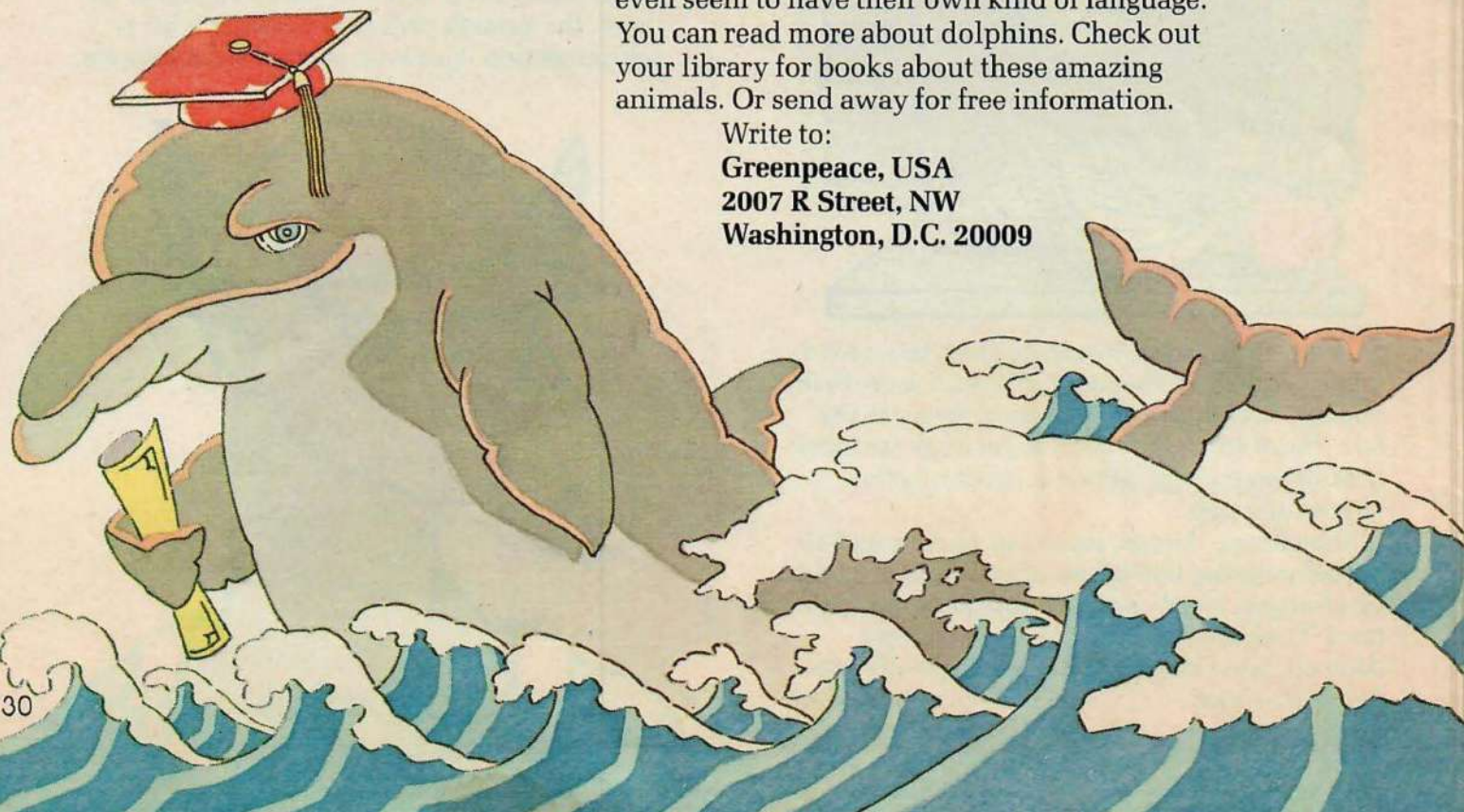


## More About Dolphins.

Dolphins may not be "busy as bees" or "sly as foxes." But they sure are very intelligent. They even seem to have their own kind of language. You can read more about dolphins. Check out your library for books about these amazing animals. Or send away for free information.

Write to:

**Greenpeace, USA**  
2007 R Street, NW  
Washington, D.C. 20009







## Get the Point

After "Working for Peanuts," on page 4, you know that when you see the Peanuts gang on TV, you're seeing a kind of optical illusion. Here is another case where your eyes will fool you:

- 1.** Hold a pencil in each hand with the points facing each other. Keep your hands about two feet apart.
- 2.** Keep one eye closed. Now try to bring the pencils together so the two points meet. Not so easy, is it?

On its own, each eye sees a picture that is a little different than the other. This is because each eye sees objects from a different angle. But you are used to seeing objects with two eyes. So it is easy to figure out where the pencils are. With just one eye open, you have trouble judging distance and depth. So you miss the point!

## 3-2-1 Contest

The Peanuts characters are some of the most popular cartoon kids and animals ever created. We'd like to see what kind of cartoon character you can dream up. Draw a picture of your character. Give it (or him or her) a name. Tell us what your character is like, what it does, or any special power it has. Our favorites will get T-shirts.

Write to:

**3-2-1- Contest: Cartoons**  
**P.O. Box 599**  
**Ridgefield, NJ 07657**





# MAIL

## Contest Bonanza

We've been overwhelmed! Our offices have been swamped with fabulous, funny, and thoughtful mail from all you readers out there. So this month's Mail Page is two pages so we can share with you the results of some of our contests. Thanks!

### ZZZZs

How do you get to sleep?  
Do you count your blessings  
instead of sheep? Here's what  
some readers do to get some  
ZZZZZs.

I listen to Weird Al's "Eat It,"  
and it puts me to sleep.  
**Peter Prinz, Manchester, NH**

I get to sleep by spelling  
the word "s-l-e-e-p" and  
rearranging the letters.  
S-L-E-E-P, P-S-L-E-E,  
E-P-S-L-E, etc. I get so  
confused that it puts me to  
sleep...pslee...epsle...yawn...  
nyaw...wnya.  
**Julie Hiraga, New York, NY**

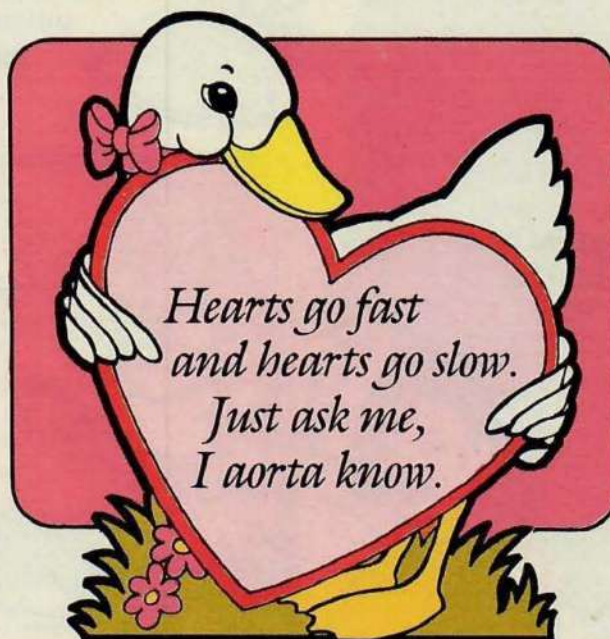
I get to sleep by listening to  
my sister snore!  
**Kirsten Copren,  
Sierraville, CA**

### Have A Heart!

Here are two Heartfelt poems  
from our February 1984 contest.

The heart is a muscle that works well  
To pump your blood through every cell.  
Veins bring blood to the heart,  
Arteries take it to every body part  
Blood enters the heart  
on the right side,  
And is full of carbon dioxide.  
It goes to the lungs  
where it's oxygenated  
Not back to where it originated.  
Instead it goes to the left side,  
From there it goes  
on a wonderful ride.  
It beats all day to my delight,  
And never even stops at night.

It's as big as your fist,  
And weighs less than a pound,  
And makes a heavy thumping sound.  
The heart is God's great  
gift from above,  
It helps us live, it helps us love.  
**Craig Curry, Ormond Beach, FL**



**Melissa Profita, Dix Hills, NY**

### Happy Landings

In our March 1984 issue,  
we suggested you send a  
balloon up with a note asking  
the finder to mail it back to  
the sender telling where the  
balloon landed.

I sent a balloon from Sioux  
City, Iowa, and it was found  
in Stockbridge, Wisconsin. It  
took one day to get there.  
**Lisa Griffith, Sioux City, IA**

I sent a balloon from  
Lancaster, Pennsylvania. It  
was found in the parking lot  
of the Conestoga Country  
Club the next day.  
**Zoe Cargas, Lancaster, PA**

### Fooled Ya'

In our April 1986 issue, we  
asked for some April Fool's  
tricks. Here are some of  
them. (Whoops—early April  
Fool's!)

I bet a boy can't do this  
trick: Stand facing the wall.  
Take two steps backwards  
and place a chair between  
you and the wall. Bend over,  
put the top of your head  
against the wall and grab the  
two sides of the seat. Pick up  
the chair and stand up. Girls  
can do this, but boys can't.  
**Rachel Newkirk,  
Schoharie, NY**

Bet your friends that they  
can't jump over a hat.  
They're bound to accept.  
They'll soon turn red when  
you place the hat in a corner!  
**Jennifer Kiple,  
Lee's Summit, MO**

Assume your friends  
don't know the capital of  
Louisiana. Ask them, "Is the  
capital of Louisiana New  
Orleans, New Orleans, or New  
Orleans?" They'll say "New  
Orleans," but the answer is  
Baton Rouge.  
**Jenni Hall, Upland, CA**



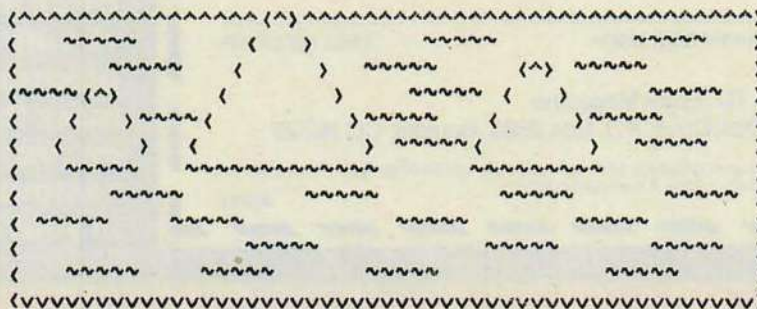
## What's Your Sign?

Here are some made-up signs that we asked for in the July/August issue.



### MARTIANS CROSSING

Ann Mayhugh  
Earlham, IA



### BEWARE SHARK CROSSING!

Eric Snyder  
Putnam, CT



### NO STREET DANCING

Kevin Carr  
Philadelphia, PA



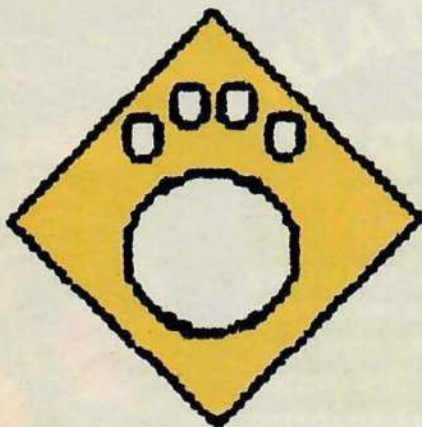
### KOALA ZONE

Christy Thomas  
Phoenix, AZ



### NO YAWNING

Ian MacDonald  
Peterborough, Ontario, Canada



### BIG FOOT CROSSING

Suhaib Abdali  
Beaverton, OR



### NO PEEKING

Sarah Ward  
Hampton, VA



### TISSUES

Courtney Skott  
Doraville, GA



### ENTER ORDER FORM

- ☐ Yes! Please send 1 year (10 issues) of Enter for only \$12.95.

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LIST BILLING NAME AND ADDRESS IF DIFFERENT FROM ABOVE.

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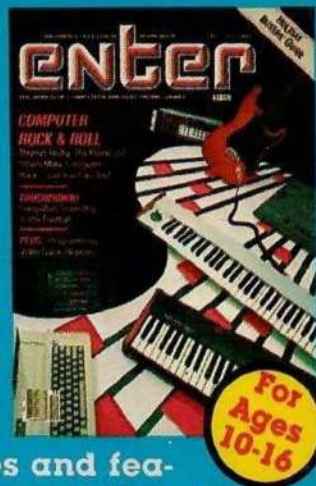
**MAIL TO:** Enter Magazine  
One Disk Drive, P.O. Box 2685, Boulder, CO 80322

Subscriptions to Canada and other countries, add \$8.00 per year. Please remit in U.S. currency. Allow 6-8 weeks for delivery.

8HZS2

## INFORM WITH ENTER

**NEW—ENTER Magazine.** The fun way for your child to learn computer skills, understand computer technology and even become a video game champ. Ten issues bring programs, quizzes, puzzles and features that involve 10-16 year olds and encourage them to become competent computerites. And you don't need a computer in your home to make it work!



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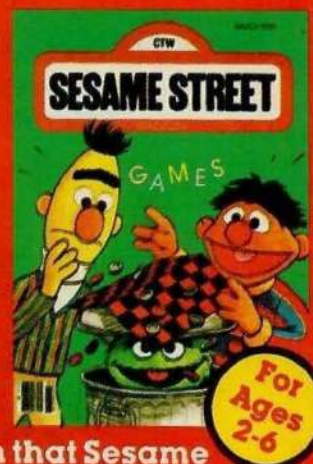
**MAIL TO:** Sesame Street Magazine  
P.O. Box 2894, Boulder, CO 80322

Subscriptions to Canada and other countries, add \$6.00 per year. Please remit in U.S. currency. Allow 6-8 weeks for delivery.

8HZT0

## ENJOY WITH SESAME STREET

**Sesame Street Magazine—**Big Bird and his delightful friends will bring dozens of playful surprises, ten terrific times a year. (It's the entertaining education that Sesame Street does best!) Puzzles, cut-outs, games, A-B-C's, 1-2-3's...there's all the magic of the TV super-series in every colorful issue.



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☐ I prefer 2 years (20 issues) for only \$18.95.

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ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

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**MAIL TO:** The Electric Company Magazine  
200 Watt Street, P.O. Box 2922, Boulder, CO 80322

Subscriptions to Canada and other countries, add \$6.00 per year. Please remit in U.S. currency. Allow 6-8 weeks for delivery.

8HZU8

## ENTERTAIN WITH ELECTRIC COMPANY

**The Electric Company Magazine—**as creatively entertaining as the T.V. show kids love. It's amusing, playful, absorbing and educational for beginning and young readers. Enjoy ten colorful issues filled with puzzles, posters, cut-outs, stories, jokes...and sunny smiles.





# Did It!

## Snow What's Happening? (page 2)

The correct order is:



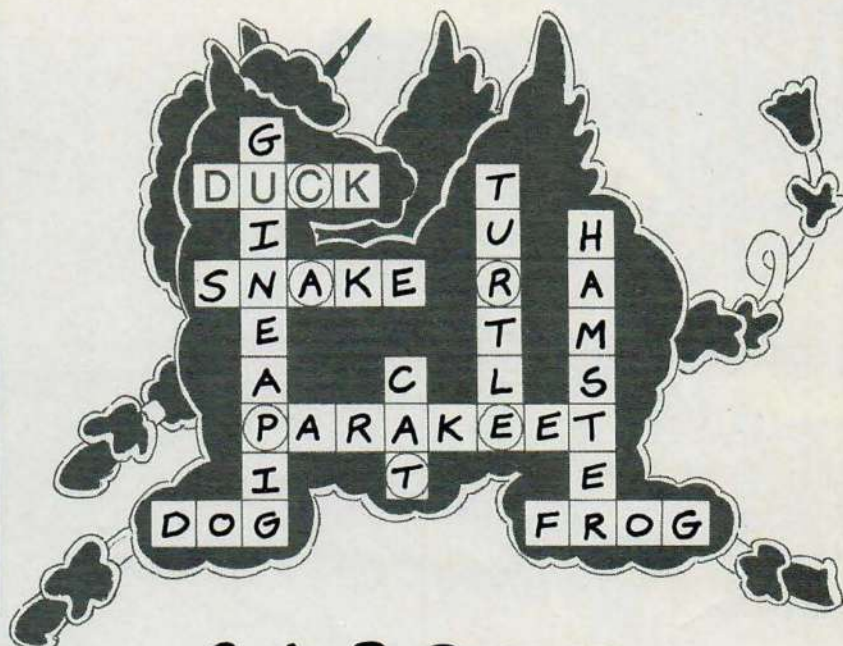
## Thank You!

Thanks to our student intern, Ilisa Sohmer, for her help with this issue.

**Oops!** In our September 1984 Any Questions?, we stated that horses are meat-eating animals. That isn't true. Horses are grass-eaters. Thanks to all of you who caught our mistake.

## Pet Puzzler (page 30)

The answers to the puzzler and the riddle are:



C A R P E T

## Next Month!

Here's a sample of what you'll find in the next issue of 3-2-1 CONTACT.

### Tornado Chasers

Meet some scientists who are studying fierce storms.

### Animal Antics

How do performing cats, dogs, and dolphins learn their special tricks? We'll show you.

**Plus Factoids, Any Questions?, Puzzles, Mail and Much More!**





## California Cruisin'

Wait a minute! What's the space shuttle doing cruising down a California street? That's what a lot of drivers can't figure out—until they take a closer look at the totally awesome sight.

Then drivers realize the space shuttle isn't really a shuttle at all. It's actually an old airplane—a DC-3. The plane was rebuilt so it would look like the shuttle. Then its body was put on bus wheels. It became the first DC-3 ever to be allowed to drive in California. Can you imagine pulling up to the shuttle car and TV's K.I.T.T. at the same time?

Of course, this shuttle will never take off for space. The closest stars it will ever get to will be the homes of the movie stars in Hollywood!

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